

# Improvement in Activity of Daily Living and Fatigue in Multiple Sclerosis Patients: the Impact of Nutrition Education

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## Abstract

**Background:** Fatigue is one of the most common complications of Multiple Sclerosis (MS). However, a few studies are available on the effect of nutrition education on fatigue and Activities of Daily Living (ADL) in patients with MS.

**Objectives:** This study aimed to assess the effect of nutrition education on fatigue and ability to perform ADL in patients with MS.

**Methods:** This quasi-experimental one group, pretest and posttest study was performed on 40 patients with MS, who were conveniently recruited among patients, registered at the Iranian MS Society. Data were collected through a demographic questionnaire, the Fatigue Severity Scale (FSS), a standard ADL scale, and a 24-hour food recall for two days. The instruments were completed at the start and two months after the intervention. Descriptive statistics and paired t test were used to analyze the data.

**Results:** Sixty percent of the patients had severe fatigue before the intervention while, 90% of them reported mild fatigue after the intervention. The mean posttest ADL was increased by 12.45 units after the intervention when compared with the pretest value ( $P<0.001$ ). Moreover, the daily intake of vitamin D and E, calcium and omega3 were lower than 75% of the Dietary Reference Intake (DRI) in most of the patients.

**Conclusions:** The present study showed the beneficial effects of nutritional training on fatigue and ADL in patients with MS. Therefore, nurses and dietitians should regularly assess the patients' dietary pattern and train them and their families about appropriate diet.

**Keywords:** Quality of Life, Fatigue, Multiple Sclerosis, Nutrition Education

## 1. Background

Multiple Sclerosis (MS) is the most common disabling disease in young adults, which results from an inflammatory demyelinating process in the central nervous system. In Iran, its prevalence ranges from 5.3 to 74.28 per 100 000 people in different regions (1). Fatigue is one of the most common complications of MS that affect about one third of patients. About 20-60 percent of the patients refer to this problem as the most disturbing symptom of the disease (2, 3). Fatigue deeply affects other aspects of one's life. Decreased physical activity would influence the patients' mood, social interactions, and recreational activities (3). Nurses have a critical role in evaluation of fatigue and physical ability in patients with MS. Thus, they can design appropriate training strategies and non-pharmacological approaches to reduce fatigue and other side effects of the disease that consequently would not only improve the pa-

tients' quality of life, but also would enhance their independence in performing their Activities of Daily Living (ADL) (2, 4).

It has been shown that a diet containing omega 3 and 6 can decrease fatigue in patients with MS (5). Thus, a health promotion education program focusing on appropriate diet might be effective on decreasing fatigue and improving the patients' ability to perform their ADL (6).

Currently, a few studies are available about the effect of nutrition education on fatigue, and ability to perform ADL in patients with MS.

## 2. Objectives

This study aimed to assess the effect of nutrition education on fatigue and ability to perform ADL in patient with MS.